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EXAMINER	
KHOO, FOONG LIN	
ART UNIT	**PAPER NUMBER**
2664	

DATE MAILED: 12/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/032,199	CROSBIE ET AL.	
	Examiner	Art Unit	
	F. Lin Khoo	2664	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 December 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,6-13,16-23,26-31* is/are rejected.

7)☒ Claim(s) *4,5,14,15,24 and 25* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *5/3/02,10/03/02*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-3, 6-10, 11-13, 16-20, 21-23, 26-30, 31 are rejected under 35 U.S.C. 102(e) as being anticipated by Haartsen (U.S. Patent No. 6,754,250).

Regarding Claim 1, Haartsen discloses a method for synchronizing access points in a wireless local area network (Fig. 1, col 8, lines 39-46) to enable a seamless transfer of a mobile device in the wireless local area network, communications in the wireless local area network being based on a plurality of timing patterns (col, 8, lines 60-67), the method comprising the computer implemented steps of:

synchronizing a second access point having a second timing pattern of the plurality of timing patterns with an initial access point having an initial timing pattern of the plurality, the second access point adjusting the second timing pattern to match the initial timing pattern to produce a synchronized second timing pattern for use by the second access point (Fig. 3; col 8, line 59 through col 9, line 29. The plurality of timing patterns are equivalent to the plurality of free-running system clocks of the nomadic devices (mobile

units in Fig. 3) in which any unit can become a master which is a role in the piconet (note: any radio unit or mobile unit can become an anchor unit which is associated to be an access point). See col 6, line 56 through col 7, line 23. Element 103 in Fig. 3 is equivalent to a second access point acting as a slave synchronized to the element 105 acting as the master (or initial access point) in piconet 320 producing a synchronized second timing pattern for use by the second access point by adding a corresponding time offset to its clock to align with the clock of the master (element 115));

synchronizing a third access point having a third timing pattern of the plurality of timing patterns with the second access point, by adjusting the third timing pattern to match the synchronized second timing pattern of the second access point to produce a synchronized third timing pattern for use by the third access point (Fig. 3; col 8, line 59 through col 9, line 29. The plurality of timing patterns are equivalent to the plurality of free-running system clocks of the nomadic devices (mobile units in Fig. 3) in which any unit can become a master which is a role in the piconet (note: any radio unit or mobile unit can become an anchor unit which is associated to be an access point). See col 6, line 56 through col 7, line 23. Element 101 in Fig. 3 is equivalent to a third access point acting as a slave synchronized to the element 103 acting as the master (or second access point) in piconet 310 producing a synchronized third timing pattern for use by the third access point by adding a corresponding time offset to its clock to align with the clock of the master (element 105)); and

transferring a connection for the mobile device by transferring an initial link between the mobile device and the initial access point to a transferred link between the mobile

device and the third access point to provide for the seamless transfer of the mobile device as a function of synchronization of the initial access point with the third access point based on the initial timing pattern and the synchronized third timing pattern (col 9, line 17 through col 10, line 9. Any of the mobile unit can move from one piconet to another piconet and can maintain synchronization with the master of the piconet it moved into since all the piconets are synchronized by the anchor unit through broadcasting of a beacon signal by the anchor unit as stated in Fig. 10. See col 12, lines 1 -23).

Regarding Claim 2, Haartsen discloses wherein the initial access point, the second access point, and the third access point form a set of synchronized access points; and wherein the method further comprises steps of: providing further access points in the wireless local area network (Fig. 3. col 8, line 59 through col 9, line 29. The initial access point, the second access point, and the third access point are all synchronized to each other through element 103 which acts as a master/slave in two piconets, respectively (310 and 320) forming a set of synchronized access points. Each of the unit acting as access points can be a master or slave in other piconets as shown in Fig. 3 element 103 which is a slave in piconet 320 and a master in piconet 310. Elements 105 (initial access point) and 101 (third access point) in a similar situation can behave like element 103 to provide further access points in the wireless local area network as discussed in col 9, lines 17-22); and

synchronizing each further access point with one of the synchronized access points so that each further access point joins the set of synchronized access points to enable the seamless transfer of the mobile device from any one of the set of synchronized access points to any other one of the set of synchronized access points (col 9, line 30 through col 10, line 9. Each unit is synchronized to the master which is locked to the beacon signal provided by the units designated as anchor units shown in Fig. 4 allowing for seamless transfer of the mobile device from any one of the set of synchronized access points to any other one of the set of synchronized access points).

Regarding Claim 3, Haartsen discloses wherein the wireless local area network includes a first piconet (Fig. 4, element 320) designated as a top level in a hierarchy of piconets and a second piconet (Fig. 4, element 310) designed as a second level in the hierarchy, and wherein the initial access point (Fig. 4, element 105) has a master role for the first piconet, the second access point (Fig. 4, element 103) has a slave role in the first piconet, the second access point has a master role for the second piconet concurrently with having the slave role in the first piconet, and the third access point (Fig. 4, element 101) has a slave role in the second piconet (col 8, line 59 through col, 9, line 15. Note: element 103 participates both in piconet 310 as a master and in piconet 320 as a slave).

Regarding Claim 6, Haartsen discloses wherein the method further includes a step of eliminating guard periods in transmissions of the second access point based on

performing the steps of synchronizing the initial access point with the second access point and synchronizing the third access point with the second access point (col 9, lines 16-66. Each of the access points are synchronized by the beacon broadcast by the anchor units and therefore as they are locked to the anchor units, the guard periods in transmissions of the second access point based on performing the steps of synchronizing the initial access point with the second access point and synchronizing the third access point with the second access point are eliminated).

Regarding Claim 7, Haartsen discloses wherein the step of transferring the connection for the mobile device is performed at a transfer rate that supports substantially uninterrupted voice communication to the mobile device from a voice communication source through the first access point and through the third access point during the step of transferring (col 7, lines 4-38; col 9, lines 42-64; col 12, lines 1-18. The beacon packet transmission time is short in the order of 100 microseconds as disclosed therefore allowing the step of transferring the connection for the mobile device performed at a transfer rate that supports substantially uninterrupted voice communication to the mobile device from a voice communication source through the first access point and through the third access point during the step of transferring).

Regarding Claim 8, Haartsen discloses wherein the transfer rate is less than about 80 milliseconds (col 9, lines 42-64. The beacon interval is on the order of 10-100

millisecond which is equivalent to the transfer rate less than about 80 milliseconds).

Regarding Claim 9, Haartsen discloses wherein the step of synchronizing the second access point includes receiving at the second access point a first timing beacon provided by the initial access point, and the step of synchronizing the third access point includes receiving at the third access point a second timing beacon provided by the second access point (col 4, line 61 through col 5, line 3; col 10, lines 23-57. Each of the slave devices adds a corresponding time offset to its clock that enables it to become aligned with the clock of the master device. By using the master address to select the proper hopping sequence and by using the time offset to align to the master clock, each slave device keeps in hop synchrony to the master device; that is, master and slave devices remain in contact by hopping synchronously to the same hop frequency or hop carrier. The first timing beacon provided by element 105 (initial access point acting as the master in piconet 320) is provided to element 103 (second access point acting as the slave in piconet 320) for synchronization and the second timing beacon provided by element 103 (second access point acting as the master in piconet 310) is provided to element 101 (third access point acting as the slave in piconet 310) for synchronization).

Regarding Claim 10, Haartsen discloses wherein the wireless local area network is based on a spread-spectrum wireless communications protocol (col 2, line 58 through col 3, line 67. Interference can be surpressed by means of spectrum spreading

as disclosed by Haartsen in Ericsson Review No. 3, 1998 in a wireless local area network in the 2.4 GHz ISM band).

Regarding Claim 11, Haartsen discloses a gateway server (computer based system, see col 13, lines 2-39) for synchronizing access points in a wireless local area network (Fig. 1, col 8, lines 39-46) to enable a seamless transfer of a mobile device in the wireless local area network, communications in the wireless local area network being based on a plurality of timing patterns (col, 8, lines 60-67), the gateway server comprising:

a communication interface for communicating with an initial access point, a second access point, and a third access point; the initial access point having an initial timing pattern of the plurality of timing patterns, the second access point having a second timing pattern of the plurality, and the third access point having a third timing pattern of the plurality (col 13, lines 2-39. The computer based system as disclosed is a system with communication interface whereby the program instructions being executed by one or more processors, or by a combination of both communicates the logic to perform the synchronization method is communicated to all the wireless units acting as access points); and

a digital processor (col 13, lines 23-28. The computer based system is integrated with discrete logic gates interconnected as a digital processor) coupled to the communication interface, the digital processor hosting and executing a gateway application (col 13, lines 30-34. Appropriate set of computer instructions is use to cause

a processor to carry out the techniques is a gateway application) that configures the digital processor to:

direct the second access point to synchronize with the initial access point, the second access point adjusting the second timing pattern to match the initial timing pattern to produce a synchronized second timing pattern for use by the second access point (Fig. 3; col 4, lines 61 through col 5, line 3: col 8, line 59 through col 9, line 29; col 6, line 56 through col 7, line 23. The plurality of timing patterns are equivalent to the plurality of free-running system clocks of the nomadic devices (mobile units in Fig. 3) in which any unit can become a master which is a role in the piconet (note: any radio unit or mobile unit can become an anchor unit which is associated to be an access point). See col 6, line 56 through col 7, line 23 . Element 103 in Fig. 3 is equivalent to a second access point acting as a slave synchronized to the element 105 acting as the master (or initial access point) in piconet 320 producing a synchronized second timing pattern for use by the second access point by adding a corresponding time offset to its clock to align with the clock of the master (element 115));

direct the third access point to synchronize with the second access point, the third access point adjusting the third timing pattern to match the synchronized second timing pattern of the second access point to produce a synchronized third timing pattern for use by the third access point (Fig. 3; col 4, lines 61 through col 5, line 3: col 8, line 59 through col 9, line 29; col 6, line 56 through col 7, line 23. Element 101 in Fig. 3 is equivalent to a third access point acting as a slave synchronized to the element 103 acting as the master (or second access point) in piconet 310 producing a synchronized

third timing pattern for use by the third access point by adding a corresponding time offset to its clock to align with the clock of the master (element 105)); and

to perform a connection transfer of an initial link between the mobile device and the initial access point to a transferred link between the mobile device and the third access point to provide for the seamless transfer of the mobile device as a function of synchronization of the initial access point with the third access point based on the initial timing pattern and the synchronized third timing pattern (col 9, line 17 through col 10, line 9. Any of the mobile unit can move from one piconet to another piconet and can maintain synchronization with the master of the piconet it moved into since all the piconets are synchronized by the anchor unit through broadcasting of a beacon signal by the anchor unit as stated in Fig. 10. See col 12, lines 1 -23).

Regarding Claim 12, Haartsen discloses wherein the initial access point, the second access point, and the third access point form a set of synchronized access points; and wherein the wireless local area network comprises further access points (Fig. 3. col 8, line 59 through col 9, line 29. The initial access point, the second access point, and the third access point are all synchronized to each other through element 103 which acts as a master/slave in two piconets, respectively (310 and 320) forming a set of synchronized access points. Each of the unit acting as access points can be a master or slave in other piconets as shown in Fig. 3 element 103 which is a slave in piconet 320 and a master in piconet 310. Elements 105 (initial access point) and 101

(third access point) in a similar situation can behave like element 103 to provide further access points in the wireless local area network as discussed in col 9, lines 17-22); and the gateway application configures the digital processor to instruct each further access point to synchronize with one of the synchronized access points so that each further access point joins the set of synchronized access points to enable the seamless transfer of the mobile device from any one of the set of synchronized access points to any other one of the set of synchronized access points (col 9, line 30 through col 10, line 9. Each unit is synchronized to the master which is locked to the beacon signal provided by the units designated as anchor units shown in Fig. 4 allowing for seamless transfer of the mobile device from any one of the set of synchronized access points to any other one of the set of synchronized access points).

Regarding Claim 13, Haartsen discloses wherein the wireless local area network includes a first piconet (Fig. 4, element 320) designated as a top level in a hierarchy of piconets and a second piconet (Fig. 4, element 310) designed as a second level in the hierarchy, and wherein the initial access point (Fig. 4, element 105) has a master role for the first piconet, the second access point (Fig. 4, element 103) has a slave role in the first piconet, the second access point has a master role for the second piconet concurrently with having the slave role in the first piconet, and the third access point (Fig. 4, element 101) has a slave role in the second piconet (col 8, line 59 through col, 9, line 15. Note: element 103 participates both in piconet 310 as a master and in piconet 320 as a slave).

Regarding Claim 16, Haartsen discloses wherein the gateway application configures the digital processor to instruct the second access point to eliminate guard periods in transmissions of the second access point based on synchronizing the initial access point with the second access point and synchronizing the third access point with the second access point (col 9, lines 16-66. Each of the access points are synchronized by the beacon broadcast by the anchor units and therefore as they are locked to the anchor units, the guard periods in transmissions of the second access point based on performing the steps of synchronizing the initial access point with the second access point and synchronizing the third access point with the second access point are eliminated).

Regarding Claim 17, Haartsen discloses wherein the gateway application configures the digital processor to perform the connection transfer for the mobile device at a transfer rate that supports substantially uninterrupted voice communication to the mobile device from a voice communication source through the first access point and through the third access point during the connection transfer (col 7, lines 4-38; col 9, lines 42-64; col 12, lines 1-18. The beacon packet transmission time is short in the order of 100 microseconds as disclosed therefore allowing the step of transferring the connection for the mobile device performed at a transfer rate that supports substantially uninterrupted voice communication to the mobile device from a voice communication

source through the first access point and through the third access point during the connection transfer).

Regarding Claim 18, Haartsen discloses wherein the transfer rate is less than about 80 milliseconds (col 9, lines 42-64. The beacon interval is on the order of 10-100 milliseconds which is equivalent to the transfer rate less than about 80 milliseconds).

Regarding Claim 19, Haartsen discloses wherein the gateway application configures the digital processor to instruct the second access point to receive a first timing beacon provided by the initial access point, and to instruct the third access point to receive a second timing beacon provided by the second access point (col 4, line 61 through col 5, line 3; col 10, lines 23-57. Each of the slave devices adds a corresponding time offset to its clock that enables it to become aligned with the clock of the master device. By using the master address to select the proper hopping sequence and by using the time offset to align to the master clock, each slave device keeps in hop synchrony to the master device; that is, master and slave devices remain in contact by hopping synchronously to the same hop frequency or hop carrier. The first timing beacon provided by element 105 (initial access point acting as the master in piconet 320) is provided to element 103 (second access point acting as the slave in piconet 320) for synchronization and the second timing beacon provided by element 103 (second access point acting as the master in piconet 310) is provided to element 101 (third access point acting as the slave in piconet 310) for synchronization).

Regarding Claim 20, Haartsen discloses wherein the wireless local area network is based on a spread-spectrum wireless communications protocol (col 2, line 58 through col 3, line 67. Interference can be surpressed by means of spectrum spreading as disclosed by Haartsen in Ericsson Review No. 3, 1998 in a wireless local area network in the 2.4 GHz ISM band).

Regarding Claim 21, Haartsen discloses a system for synchronizing access points in a wireless local area network (Fig. 1, col 8, lines 39-46) to enable a seamless transfer of a mobile device in the wireless local area network, communications in the wireless local area network being based on a plurality of timing patterns (col, 8, lines 60-67), the system comprising:

a second access point in communication with an initial access point, the second access point for synchronizing the second access point with the initial access point, the initial access point having an initial timing pattern of the plurality of timing patterns, the second access point having a second timing pattern of the plurality and adjusting the second timing pattern to match the initial timing pattern to produce a synchronized second timing pattern for use by the second access point (Fig. 3; col 8, line 59 through col 9, line 29. The plurality of timing patterns are equivalent to the plurality of free-running system clocks of the nomadic devices (mobile units in Fig. 3) in which any unit can become a master which is a role in the piconet (note: any radio unit or mobile unit can become an anchor unit which is associated to be an access point). See col 6, line 56

through col 7, line 23. Element 103 in Fig. 3 is equivalent to a second access point acting as a slave synchronized to the element 105 acting as the master (or initial access point) in piconet 320 producing a synchronized second timing pattern for use by the second access point by adding a corresponding time offset to its clock to align with the clock of the master (element 115));

a third access point in communication with the second access point, the third access point for synchronizing the third access point with the second access point, the third access point having a third timing pattern of the plurality of timing patterns and adjusting the third timing pattern to match the synchronized second timing pattern of the second access point to produce a synchronized third timing pattern for use by the third access point (Fig. 3; col 8, line 59 through col 9, line 29. The plurality of timing patterns are equivalent to the plurality of free-running system clocks of the nomadic devices (mobile units in Fig. 3) in which any unit can become a master which is a role in the piconet (note: any radio unit or mobile unit can become an anchor unit which is associated to be an access point). See col 6, line 56 through col 7, line 23. Element 101 in Fig. 3 is equivalent to a third access point acting as a slave synchronized to the element 103 acting as the master (or second access point) in piconet 310 producing a synchronized third timing pattern for use by the third access point by adding a corresponding time offset to its clock to align with the clock of the master (element 105)); and

a gateway server in communication with the initial access point, the second access point, and the third access point, the gateway server for performing a connection transfer of an initial link between the mobile device and the initial access point to a

transferred link between the mobile device and the third access point to provide for the seamless transfer of the mobile device as a function of synchronization-of the initial access point with the third access point based on the initial timing pattern and the synchronized third timing pattern (see col 13, lines 2-39. The computer based system as disclosed is equivalent to a gateway server providing program instructions to carry out the techniques of the synchronization process to all the wireless units (or access points). See col 9, line 17 through col 10, line 9. Any of the mobile unit can move from one piconet to another piconet and can maintain synchronization with the master of the piconet it moved into since all the piconets are synchronized by the anchor unit through broadcasting of a beacon signal by the anchor unit as stated in Fig. 10. See col 12, lines 1 -23).

Regarding Claim 22, Haartsen discloses wherein the initial access point, the second access point, and the third access point form a set of synchronized access points; and wherein the wireless local area network comprises further access points (Fig. 3. col 8, line 59 through col 9, line 29. The initial access point, the second access point, and the third access point are all synchronized to each other through element 103 which acts as a master/slave in two piconets, respectively (310 and 320) forming a set of synchronized access points. Each of the unit acting as access points can be a master or slave in other piconets as shown in Fig. 3 element 103 which is a slave in piconet 320 and a master in piconet 310. Elements 105 (initial access point) and 101 (third access point) in a similar situation can behave like element 103 to provide further

access points in the wireless local area network as discussed in col 9, lines 17-22); and each further access point synchronizes with one of the synchronized access points so that each further access point joins the set of synchronized access points to enable the seamless transfer of the mobile device from any one of the set of synchronized access points to any other one of the set of synchronized access points (col 9, line 30 through col 10, line 9. Each unit is synchronized to the master which is locked to the beacon signal provided by the units designated as anchor units shown in Fig. 4 allowing for seamless transfer of the mobile device from any one of the set of synchronized access points to any other one of the set of synchronized access points).

Regarding Claim 23, Haartsen discloses wherein the wireless local area network includes a first piconet (Fig. 4, element 320) designated as a top level in a hierarchy of piconets and a second piconet (Fig. 4, element 310) designed as a second level in the hierarchy, and wherein the initial access point (Fig. 4, element 105) has a master role for the first piconet, the second access point (Fig. 4, element 103) has a slave role in the first piconet, the second access point has a master role for the second piconet concurrently with having the slave role in the first piconet, and the third access point (Fig. 4, element 101) has a slave role in the second piconet (col 8, line 59 through col, 9, line 15. Note: element 103 participates both in piconet 310 as a master and in piconet 320 as a slave).

Regarding Claim 26, Haartsen discloses wherein the second access point eliminates guard periods in transmissions of the second access point based on synchronizing the initial access point with the second access point and synchronizing the third access point with the second access point (col 9, lines 16-66. Each of the access points are synchronized by the beacon broadcast by the anchor units and therefore locked to the anchor units which is equivalent to the second access point eliminating guard periods in transmissions of the second access point based on synchronizing the initial access point with the second access point and synchronizing the third access point with the second access point).

Regarding Claim 27, Haartsen discloses wherein the gateway application configures the digital processor to perform the connection transfer for the mobile device at a transfer rate that supports substantially uninterrupted voice communication to the mobile device from a voice communication source through the first access point and through the third access point during the connection transfer (col 7, lines 4-38; col 9, lines 42-64; col 12, lines 1-18. The beacon packet transmission time is short in the order of 100 microseconds as disclosed therefore allowing the step of transferring the connection for the mobile device performed at a transfer rate that supports substantially uninterrupted voice communication to the mobile device from a voice communication source through the first access point and through the third access point during the connection transfer).

Regarding Claim 28, Haartsen discloses wherein the transfer rate is less than about 80 milliseconds (col 9, lines 42-64. The beacon interval is on the order of 10-100 milliseconds which is equivalent to the transfer rate less than about 80 milliseconds).

Regarding Claim 29, Haartsen discloses wherein the second access point receives a first timing beacon provided by the initial access point, and the third access point receives a second timing beacon provided by the second access point (col 4, line 61 through col 5, line 3; col 10, lines 23-57. Each of the slave devices adds a corresponding time offset to its clock that enables it to become aligned with the clock of the master device. By using the master address to select the proper hopping sequence and by using the time offset to align to the master clock, each slave device keeps in hop synchrony to the master device; that is, master and slave devices remain in contact by hopping synchronously to the same hop frequency or hop carrier. The first timing beacon provided by element 105 (initial access point acting as the master in piconet 320) is provided to element 103 (second access point acting as the slave in piconet 320) for synchronization and the second timing beacon provided by element 103 (second access point acting as the master in piconet 310) is provided to element 101 (third access point acting as the slave in piconet 310) for synchronization).

Regarding Claim 30, Haartsen discloses wherein the wireless local area network is based on a spread-spectrum wireless communications protocol (col 2, line 58 through col 3, line 67. Interference can be surpressed by means of spectrum spreading

as disclosed by Haartsen in Ericsson Review No. 3, 1998 in a wireless local area network in the 2.4 GHz ISM band).

Regarding Claim 31, Haartsen discloses a computer program product (computer based system, see col 13, lines 2-39) that includes a computer usable medium (col 13, lines 28-33) having computer program instructions (col 13, lines 28-33) stored thereon for synchronizing access points in a wireless local area network (Fig. 1, col 8, lines 39-46) to enable a seamless transfer of a mobile device in the wireless local area network, communications in the wireless local area network being based on a plurality of timing pattern (col, 8, lines 60-67), such that the computer program instructions, when performed by a digital processor, cause the digital processor to (col 13, lines 23-28. The computer based system is integrated with discrete logic gates interconnected as a digital processor):

synchronize a second access point having a second timing pattern of the plurality of timing patterns with an initial access point having an initial timing pattern of the plurality, by adjusting the second timing pattern to match the initial timing pattern to produce a synchronized second timing pattern for use by the second access point (Fig. 3; col 8, line 59 through col 9, line 29. The plurality of timing patterns are equivalent to the plurality of free-running system clocks of the nomadic devices (mobile units in Fig. 3) in which any unit can become a master which is a role in the piconet (note: any radio unit or mobile unit can become an anchor unit which is associated to be an access point). See col 6, line 56 through col 7, line 23. Element 103 in Fig. 3 is equivalent to a second

access point acting as a slave synchronized to the element 105 acting as the master (or initial access point) in piconet 320 producing a synchronized second timing pattern for use by the second access point by adding a corresponding time offset to its clock to align with the clock of the master (element 115));

synchronize a third access point having a third timing pattern of the plurality of timing patterns with the second access point, by adjusting the third timing pattern to match the synchronized second timing pattern of the second access point to produce a synchronized third timing pattern for use by the third access point (Fig. 3; col 8, line 59 through col 9, line 29. The plurality of timing patterns are equivalent to the plurality of free-running system clocks of the nomadic devices (mobile units in Fig. 3) in which any unit can become a master which is a role in the piconet (note: any radio unit or mobile unit can become an anchor unit which is associated to be an access point). See col 6, line 56 through col 7, line 23 . Element 101 in Fig. 3 is equivalent to a third access point acting as a slave synchronized to the element 103 acting as the master (or second access point) in piconet 310 producing a synchronized third timing pattern for use by the third access point by adding a corresponding time offset to its clock to align with the clock of the master (element 105)); and

transfer a connection for the mobile device by transferring an initial link between the mobile device and the initial access point to a transferred link between the mobile device and the third access point to provide for the seamless transfer of the mobile device as a function of synchronization of the initial access point with the third access point based on the initial timing pattern and the synchronized third timing pattern (col 9,

line 17 through col 10, line 9. Any of the mobile unit can move from one piconet to another piconet and can maintain synchronization with the master of the piconet it moved into since all the piconets are synchronized by the anchor unit through broadcasting of a beacon signal by the anchor unit as stated in Fig. 10. See col 12, lines 1-23).

Allowable Subject Matter

3. Claims 4, 5, 14, 15, 24, 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 6,026,297 to Haartsen relates to providing techniques for enabling wireless units to contemporaneously participate in communications taking place in more than one piconet at a time.

U.S. Patent No. 6,834,192 to Watanabe et al. relates generally to a manner by which to handover communication with a mobile Bluetooth-compatible (BT), or other

communication, device from an active communication device to a target communication device.

U.S. Patent No. 6,675,015 to Martini et al. relates to a manner by which to facilitate communication handovers of a Bluetooth or other, mobile device to a target base station.

U.S Patent No. 6,731,939 to Watanabe et al. relates to apparatus, and associated method, by which to allocate channels in which the fixed-site transceiver and the mobile stations are operable pursuant to the Bluetooth, or other, standard.

U.S. Patent No. 6,816,510 to Banerjee relates a method and system for synchronizing clocks in a packet network that includes a master node and at least one slave node that communicate with one another is disclosed.

The above prior art are cited to further show the same field of endeavor with respect to the applicant's claimed invention.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to F. Lin Khoo whose telephone number is 571-272-5508. The examiner can normally be reached on flex time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on 571-272-3134. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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